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> Abstract for an Invited Paper for the APR18 Meeting of the American Physical Society

The Physics of the Cosmos Multimessenger Science Analysis Group.

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The power of multimessenger astrophysics was demonstrated in 2017 through the observation of a binary neutron star merger, the first astrophysical event observed in both the gravitational wave and electromagnetic spectra. Multimessenger astrophysics will remain an important tool for astronomers in the future as we combine electromagnetic radiation, gravitational wave radiation, and particle astrophysics observations of cosmic events. NASA's space observatories in the 2020 decade and beyond will have an important role to play, including those that will continue to operate in the 2020s, such as Hubble, Chandra, Swift, Fermi, those currently planned, including JWST, WFIRST, Athena, LISA, Explorers, and those that will be considered by the 2020 astrophysics decadal committee. Many astrophysics Science Analysis Group formed early in 2018 by NASA's Physics of the Cosmos community will analyze the potential scientific benefits of multimessenger observations made possible by NASA observatories in the 2020 decade and beyond, working in conjunction with each other or with other ground and space-based instruments. This talk will describe the goals and plans of this team, as well as ways for the broader astrophysics community to get involved.